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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/674,090	09/30/2003	Tetsujiro Kondo	238873US6	2160

22850 7590 07/20/2007
OBLON, SPIVAK, MCCLELLAND, MAIER & NEUSTADT, P.C.
1940 DUKE STREET
ALEXANDRIA, VA 22314

EXAMINER

KOVAL, MELISSA J

ART UNIT	PAPER NUMBER
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2862

NOTIFICATION DATE	DELIVERY MODE
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07/20/2007

ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

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Office Action Summary

Application No.

10/674,090

Applicant(s)

KONDO ET AL.

Examiner

Melissa J. Koval

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 02 May 2007.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-33 is/are pending in the application.
- 4a) Of the above claim(s) 13-20, and 22-33 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1,3,8-10,12 and 21 is/are rejected.
- 7) ☒ Claim(s) 2,4-7 and 11 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 30 September 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Election/Restrictions

Claims 22-33 are withdrawn from further consideration pursuant to 37 CFR 1.142(b), as being drawn to a nonelected species, there being no allowable generic or linking claim. Applicant timely traversed the restriction (election) requirement in the reply filed on May 2, 2007.

Claims 13 through 20 are further withdrawn by the examiner. See the remarks set forth below.

Applicant's election with traverse of Invention I, Species 2 in the reply filed on May 2, 2007 is acknowledged. The traversal is on the ground(s) that "a search and examination of the entire application would not place a serious burden on the Examiner, whereas it would be a serious burden on Applicants to prosecute and maintain separate applications".

This is not found persuasive because applicants provide no further evidence to support their position. A comparison of independent claim 1 with withdrawn independent claim 22 show two distinctly different species. Particularly the following limitations of withdrawn claim 22 indicate that the species claimed therein may be classified outside the projection art, and at least requires a search in arts drawn to image analysis and plural displays, i.e. classes 382 and 345, for example:

"an image selecting mechanism configured to select a viewpoint image of a predetermined object as viewed from a viewpoint of a user, based on the viewpoint of the user, from images captured respectively from the plurality of positions; and

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a viewpoint-image converting mechanism configured to convert the viewpoint image into the projected image based on the viewpoint of the user and the predetermined 3-dimensional shape of the interior display surface.”

Claims 13 through 20 are withdrawn essentially for the same reasons.

The requirement is still deemed proper and is therefore made FINAL.

Claim Objections

Claims 1 through 21 are objected to because of the following informalities: With respect to claim 1, the position of the viewer is not clearly described with respect to the disposition of the first and second display structures. The limitation “so as to be” may be interpreted as an intention of use without the presence of limitations describing structure. See MPEP 2114. Appropriate correction is required.

Claims 2 through 21 depend from claim 1 or an intervening claim.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1, 3, 8-10, 12, and 21 are rejected under 35 U.S.C. 103(a) as being unpatentable over Perra U.S. Patent 6,644,816 B1, Figure 3 in view of Figure 2.

See column 5, lines 19 through 43.

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Claim 1 sets forth: "A display apparatus, comprising:

a first display structure having a 3-diminsional shape with an interior surface (See projector 22 and reflecting sphere 18 of Fig. 3),

said first display structure being configured to display a first image on said interior surface so as to be viewable from a position that is at least partially surrounded by said interior surface (The projector 23 sends light/images reflected to the upper part of cylinder shell 21.);

and a second display structure configured to display a second image on another surface that is viewable from said position that is at least partially surrounded by said interior surface (The projector 22 casts light/images on the lower part of the reflecting sphere.)"

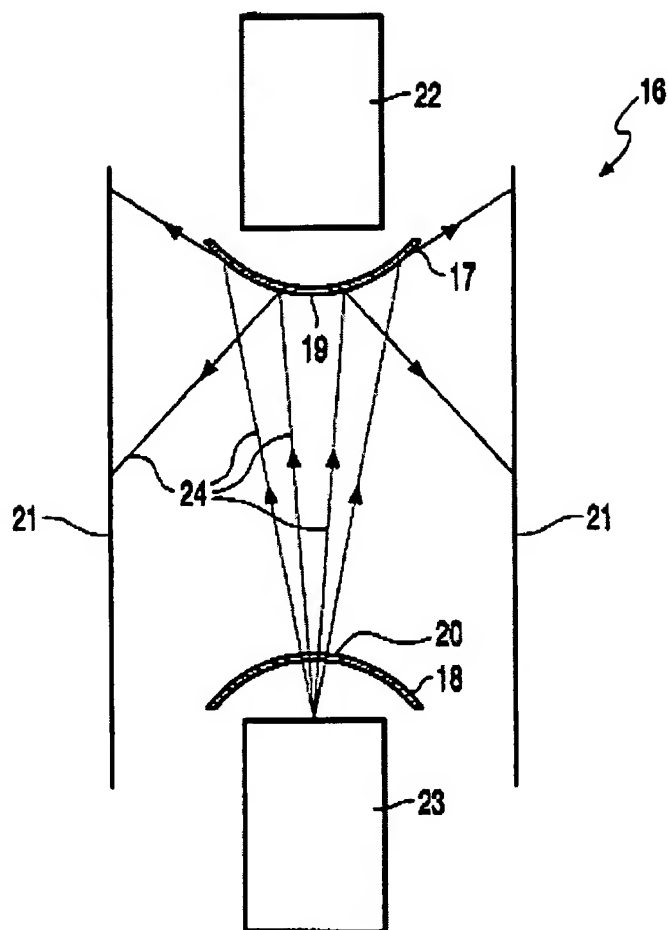
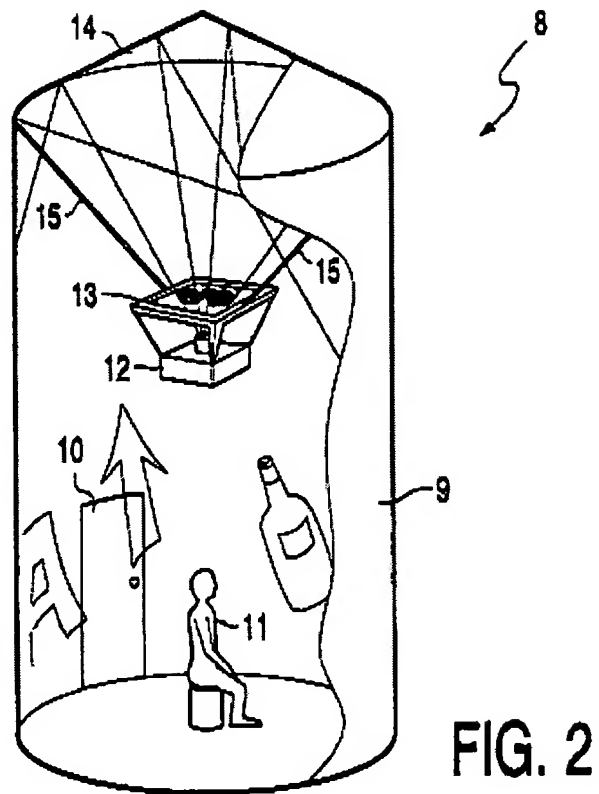


FIG. 3

Perra shows at least one embodiment wherein a viewer can be inside a cylindrical projection surface for viewing multiple images from a projection device analogous to that shown in Fig. 3. See below:



Although projectors 22, 23 are described as preferably operating synchronously, clearly they do not have to. In column 6:

Although the invention is elucidated with reference to only a few embodiments, it will be apparent to all that the invention is in no way limited to the described and shown embodiments. On the contrary, many further variations are possible for the skilled person within the scope of the invention. It is thus possible to change the shape of the reflector, to provide the device with a plurality of reflectors, to employ different light sources for separate colours and/or projection surface parts, and so on.

It would have been obvious to one having ordinary skill in the art at the time the invention was made to surround the viewer 11 with multiple images using the projection

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device of Figure 3 rather than the projection device illustrated in Figure 2. The motivation to make such a modification would be to enhance the three-dimensionality of the viewing experience for a viewer. See column 5, lines 25 through 28 of Perra.

in FIG. 1. The viewer 11 located in cylinder 9 can thus undergo a sensation wherein it seems as if he is in a different reality.

Claims 3, 8-10, 12 and 21 are met for the same reasons applied above.

Allowable Subject Matter

Claims 2, 4-7, and 11 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

The following is a statement of reasons for the indication of allowable subject matter:

Each and every limitation of claims 2, 4, and 7 are required to patentably distinguish the claim over the prior art of record. The remaining claims are dependent upon those claims or an intervening claim.

Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Onaga U.S. Patent 7,229,176 B2 teaches a device for displaying imagery three-dimensionally.

Chen et al. U.S. Patent 5,803,570 teaches a calibration system and method for display optical systems.

Shaffron U.S. Patent 6,253,494 B1 teaches a screen-to-stage and stage-to-screen seamless transition theater.

Lawrence U.S. Patent 7,097,307 B2 teaches systems and methods for displayed simulated images.

Lantz U.S. patent 6,909,543 B2 teaches a foveated display system.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Melissa J. Koval whose telephone number is (571) 272-2121. The examiner can normally be reached on Monday through Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Patrick Assouad can be reached on (571) 272-2210. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

MJK

MELISSA JAN KOVAL
PRIMARY EXAMINER

